

SEQUENCE LISTING

<110> Hodge, Martin R.

<120> Novel IL-9/IL-2 Receptor-Like Molecules
and Uses Thereof

<130> 5800-17A

<150> US 09/313,913

<151> 1999-05-18

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<212> DNA

<213> Homo sapiens

<220>

<221> CDS

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atggatttct gagaaagaag ccgaaacaga aggcccgctg gagtcagc atg ccg cgt	357
Met Pro Arg	

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Gly Trp Ala Ala Pro Leu Leu Leu Leu Leu Gln Gly Gly Trp Gly	
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tgc ccc gac ctc gtc tgc tac acc gat tac ctc cag acg gtc atc tgc	453
Cys Pro Asp Leu Val Cys Tyr Thr Asp Tyr Leu Gln Thr Val Ile Cys	
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Ile Leu Glu Met Trp Asn Leu His Pro Ser Thr Leu Thr Leu Thr Trp	
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Gln Asp Gln Tyr Glu Glu Leu Lys Asp Glu Ala Thr Ser Cys Ser Leu	
55 60 65	

cac agg tcg gcc cac aat gcc acg cat gcc acc tac acc tgc cac atg	597
His Arg Ser Ala His Asn Ala Thr His Ala Thr Tyr Thr Cys His Met	
70 75 80	

gat gta ttc cac ttc atg gcc gac gac att ttc agt gtc aac atc aca	645
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Asp Val Phe His Phe Met Ala Asp Asp Ile Phe Ser Val Asn Ile Thr	
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gac cag tct ggc aac tac tcc cag gag tgt ggc agc ttt ctc ctg gct	693
Asp Gln Ser Gly Asn Tyr Ser Gln Glu Cys Gly Ser Phe Leu Leu Ala	
100 105 110 115	
gag agc atc aag ccg gct ccc cct ttc aac gtg act gtg acc ttc tca	741
Glu Ser Ile Lys Pro Ala Pro Pro Phe Asn Val Thr Val Thr Phe Ser	
120 125 130	
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Gly Gln Tyr Asn Ile Ser Trp Arg Ser Asp Tyr Glu Asp Pro Ala Phe	
135 140 145	
tac atg ctg aag ggc aag ctt cag tat gag ctg cag tac agg aac cgg	837
Tyr Met Leu Lys Gly Lys Leu Gln Tyr Glu Leu Gln Tyr Arg Asn Arg	
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Gly Asp Pro Trp Ala Val Ser Pro Arg Arg Lys Leu Ile Ser Val Asp	
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Tyr Glu Leu Gln Val Arg Ala Gly Pro Met Pro Gly Ser Ser Tyr Gln	
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Leu Trp Arg Leu Trp Lys Lys Ile Trp Ala Val Pro Ser Pro Glu Arg	
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Phe Phe Met Pro Leu Tyr Lys Gly Cys Ser Gly Asp Phe Lys Lys Trp	
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Val Gly Ala Pro Phe Thr Gly Ser Ser Leu Glu Leu Gly Pro Trp Ser	
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Pro Glu Val Pro Ser Thr Leu Glu Val Tyr Ser Cys His Pro Pro Arg	

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ctg gat gct ggc ctg Leu Asp Ala Gly Leu 405	gag gag ccc agc cca Glu Pro Ser Pro Gly 410	cta gag gac cca ctc ttg Leu Glu Asp Pro Leu 415	1605
gat gca ggg acc aca Asp Ala Gly Thr Thr 420	gtc ctg tcc tgt ggc Val Leu Ser Cys Gly 425	tgt gtc tca gct ggc agc Cys Val Ser Ala Gly Ser 430 435	1653
cct ggg cta gga ggg Pro Gly Leu Gly Gly 440	ccc ctg gga agc ctc Pro Leu Gly Ser Leu 445	ctg gac aga cta aag cca Leu Asp Arg Leu Lys Pro 450	1701
ccc ctt gca gat ggg Pro Leu Ala Asp Gly 455	gag gag gac tgg gct Glu Asp Trp Ala Gly 460	ggg gga ctg ccc tgg Gly Gly Leu Pro Trp 465	1749
cgg tca cct gga ggg Arg Ser Pro Gly Gly 470	gtc tca gag agt gag Val Ser Glu Ser Glu 475	gcg ggc tca ccc ctg gcc Ala Gly Ser Pro Leu 480	1797
ggc ctg gat atg gac Gly Leu Asp Met Asp 485	acg ttt gac agt ggc Thr Phe Asp Ser Gly 490	ttt gtg ggc tct gac tgc Phe Val Gly Ser Asp Cys 495	1845
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ccc cgg agc tac ctc Pro Arg Ser Tyr Leu 520	cgc cag tgg gtg gtc Arg Gln Trp Val Val 525	att cct ccg cca ctt tcg Ile Pro Pro Pro Leu Ser 530	1941
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<212> PRT
<213> Homo sapiens IL-2/IL-9 Receptor Like

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<400> 2

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Cys Ser Leu His Arg Ser Ala His Asn Ala Thr His Ala Thr Tyr Thr
65     70     75     80
Cys His Met Asp Val Phe His Phe Met Ala Asp Asp Ile Phe Ser Val
85     90     95
Asn Ile Thr Asp Gln Ser Gly Asn Tyr Ser Gln Glu Cys Gly Ser Phe
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Thr Phe Ser Gly Gln Tyr Asn Ile Ser Trp Arg Ser Asp Tyr Glu Asp
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Pro Ala Phe Tyr Met Leu Lys Gly Lys Leu Gln Tyr Glu Leu Gln Tyr
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Arg Asn Arg Gly Asp Pro Trp Ala Val Ser Pro Arg Arg Lys Leu Ile
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Ser Val Asp Ser Arg Ser Val Ser Leu Leu Pro Leu Glu Phe Arg Lys
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Asp Ser Ser Tyr Glu Leu Gln Val Arg Ala Gly Pro Met Pro Gly Ser
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Ser Tyr Gln Gly Thr Trp Ser Glu Trp Ser Asp Pro Val Ile Phe Gln
210    215    220
Thr Gln Ser Glu Glu Leu Lys Glu Gly Trp Asn Pro His Leu Leu Leu
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Thr His Pro Leu Trp Arg Leu Trp Lys Lys Ile Trp Ala Val Pro Ser
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Pro Glu Arg Phe Phe Met Pro Leu Tyr Lys Gly Cys Ser Gly Asp Phe
275    280    285
Lys Lys Trp Val Gly Ala Pro Phe Thr Gly Ser Ser Leu Glu Leu Gly
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Pro Trp Ser Pro Glu Val Pro Ser Thr Leu Glu Val Tyr Ser Cys His
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Pro Pro Arg Ser Pro Ala Lys Arg Leu Gln Leu Thr Glu Leu Gln Glu
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Pro Ala Glu Leu Val Glu Ser Asp Gly Val Pro Lys Pro Ser Phe Trp

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Ala Leu His Leu Ser Leu Tyr Pro Ala Lys Glu Lys Lys Phe Pro Gly	
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ctg ccg ggt ctg gaa gag caa ctg gag tgt gat gga atg tct gag cct	1422
Leu Pro Gly Leu Glu Glu Gln Leu Glu Cys Asp Gly Met Ser Glu Pro	
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Tyr Ser Glu Glu Arg Asp Arg Pro Tyr Gly Leu Val Ser Ile Asp Thr	
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Val Thr Val Val Gly Asp Ala Glu Gly Leu Cys Val Trp Pro Cys Ser Cys	
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Trp Thr Ala Asp Pro Thr Trp Arg Thr Gly Ser Pro Gly Gly Gly Ser	
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Glu Ser Glu Ala Gly Ser Pro Pro Gly Leu Asp Met Asp Thr Phe Asp	
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Ser Gly Phe Ala Gly Ser Asp Cys Gly Ser Pro Val Glu Thr Asp Glu	
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<211> 529
<212> PRT
<213> Mus musculus

<400> 4

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35 40 45
Leu Thr Trp Gln Asp Glu Tyr Glu Glu Leu Gln Asp Gln Glu Thr Phe
50 55 60
Cys Ser Leu His Lys Ser Gly His Asn Thr Thr His Ile Trp Tyr Thr
65 70 75 80
Cys His Met Arg Leu Ser Gln Phe Leu Ser Asp Glu Val Phe Ile Val
85 90 95
Asn Val Thr Asp Gln Ser Gly Asn Asn Ser Gln Glu Cys Gly Ser Phe
100 105 110
Val Leu Ala Glu Ser Ile Lys Pro Ala Pro Pro Leu Asn Val Thr Val
115 120 125
Ala Phe Ser Gly Arg Tyr Asp Ile Ser Trp Asp Ser Ala Tyr Asp Glu
130 135 140
Pro Ser Asn Tyr Val Leu Arg Gly Lys Leu Gln Tyr Glu Leu Gln Tyr
145 150 155 160
Arg Asn Leu Arg Asp Pro Tyr Ala Val Arg Pro Val Thr Lys Leu Ile
165 170 175
Ser Val Asp Ser Arg Asn Val Ser Leu Leu Pro Glu Glu Phe His Lys
180 185 190
Asp Ser Ser Tyr Gln Leu Gln Met Arg Ala Ala Pro Gln Pro Gly Thr
195 200 205
Ser Phe Arg Gly Thr Trp Ser Glu Trp Ser Asp Pro Val Ile Phe Gln
210 215 220
Thr Gln Ala Gly Glu Pro Glu Ala Gly Trp Asp Pro His Met Leu Leu
225 230 235 240
Leu Leu Ala Val Leu Ile Ile Val Leu Val Phe Met Gly Leu Lys Ile
245 250 255
His Leu Pro Trp Arg Leu Trp Lys Lys Ile Trp Ala Pro Val Pro Thr
260 265 270
Pro Glu Ser Phe Phe Gln Pro Leu Tyr Arg Glu His Ser Gly Asn Phe

275 280 285
 Lys Lys Trp Val Asn Thr Pro Phe Thr Ala Ser Ser Ile Glu Leu Val
 290 295 300
 Pro Gln Ser Ser Thr Thr Thr Ser Ala Leu His Leu Ser Leu Tyr Pro
 305 310 315 320
 Ala Lys Glu Lys Lys Phe Pro Gly Leu Pro Gly Leu Glu Glu Gln Leu
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 Tyr Gly Leu Val Ser Ile Asp Thr Val Thr Val Gly Asp Ala Glu Gly
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<210> 5
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 <212> PRT
 <213> Homo sapiens

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 65 70 75 80
 Gln Ala Ser Trp Ala Cys Asn Leu Ile Leu Gly Ala Pro Asp Ser Gln
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<210> 6
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 <212> PRT

<213> Mus musculus

<400> 6

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Phe	Ser	Gly	Phe	Phe	Ser	Cys	Val	Tyr	Ile	Leu	Val	Lys	Cys	Arg	Tyr
			260					265					270		
Leu	Gly	Pro	Trp	Leu	Lys	Thr	Val	Leu	Lys	Cys	His	Ile	Pro	Asp	Pro
		275					280					285			
Ser	Glu	Phe	Phe	Ser	Gln	Leu	Ser	Ser	Gln	His	Gly	Gly	Asp	Leu	Gln
	290					295					300				
Lys	Trp	Leu	Ser	Ser	Pro	Val	Pro	Leu	Ser	Phe	Phe	Ser	Pro	Ser	Gly
305					310					315					320
Pro	Ala	Pro	Glu	Ile	Ser	Pro	Leu	Glu	Val	Leu	Asp	Gly	Asp	Ser	Lys
				325					330					335	
Ala	Val	Gln	Leu	Leu	Leu	Gln	Lys	Asp	Ser	Ala	Pro	Leu	Pro	Ser	
			340					345					350		
Pro	Ser	Gly	His	Ser	Gln	Ala	Ser	Cys	Phe	Thr	Asn	Gln	Gly	Tyr	Phe
		355					360					365			
Phe	Phe	His	Leu	Pro	Asn	Ala	Leu	Glu	Ile	Glu	Ser	Cys	Gln	Val	Tyr
		370				375					380				
Phe	Thr	Tyr	Asp	Pro	Cys	Val	Glu	Glu	Glu	Val	Glu	Glu	Asp	Gly	Ser
385					390					395					400
Arg	Leu	Pro	Glu	Gly	Ser	Pro	His	Pro	Pro	Leu	Leu	Pro	Leu	Ala	Gly
				405					410					415	
Glu	Gln	Asp	Asp	Tyr	Cys	Ala	Phe	Pro	Pro	Arg	Asp	Asp	Leu	Leu	Leu
			420					425					430		

Phe	Ser	Pro	Ser	Leu	Ser	Thr	Pro	Asn	Thr	Ala	Tyr	Gly	Gly	Ser	Arg
		435					440					445			
Ala	Pro	Glu	Glu	Arg	Ser	Pro	Leu	Ser	Leu	His	Glu	Gly	Leu	Pro	Ser
	450					455					460				
Leu	Ala	Ser	Arg	Asp	Leu	Met	Gly	Leu	Gln	Arg	Pro	Leu	Glu	Arg	Met
465					470					475					480
Pro	Glu	Gly	Asp	Gly	Glu	Gly	Leu	Ser	Ala	Asn	Ser	Ser	Gly	Glu	Gln
				485					490					495	
Ala	Ser	Val	Pro	Glu	Gly	Asn	Leu	His	Gly	Gln	Asp	Gln	Asp	Arg	Gly
			500					505					510		
Gln	Gly	Pro	Ile	Leu	Thr	Leu	Asn	Thr	Asp	Ala	Tyr	Leu	Ser	Leu	Gln
		515					520					525			
Glu	Leu	Gln	Ala	Gln	Asp	Ser	Val	His	Leu	Ile					
	530					535									

<210> 7

<211> 522

<212> PRT

<213> Homo sapiens

<400> 7

Met	Gly	Leu	Gly	Arg	Cys	Ile	Trp	Glu	Gly	Trp	Thr	Leu	Glu	Ser	Glu
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Ala	Leu	Arg	Arg	Asp	Met	Gly	Thr	Trp	Leu	Leu	Ala	Cys	Ile	Cys	Ile
			20					25					30		
Cys	Thr	Cys	Val	Cys	Leu	Gly	Val	Ser	Val	Thr	Gly	Glu	Gly	Gln	Gly
		35					40					45			
Pro	Arg	Ser	Arg	Thr	Phe	Thr	Cys	Leu	Thr	Asn	Asn	Ile	Leu	Arg	Ile
	50					55					60				
Asp	Cys	His	Trp	Ser	Ala	Pro	Glu	Leu	Gly	Gln	Gly	Ser	Ser	Pro	Trp
65					70					75					80
Leu	Leu	Phe	Thr	Ser	Asn	Gln	Ala	Pro	Gly	Gly	Thr	His	Lys	Cys	Ile
				85					90					95	
Leu	Arg	Gly	Ser	Glu	Cys	Thr	Val	Val	Leu	Pro	Pro	Glu	Ala	Val	Leu
			100					105					110		
Val	Pro	Ser	Asp	Asn	Phe	Thr	Ile	Thr	Phe	His	His	Cys	Met	Ser	Gly
		115					120					125			
Arg	Glu	Gln	Val	Ser	Leu	Val	Asp	Pro	Glu	Tyr	Leu	Pro	Arg	Arg	His
	130					135					140				
Val	Lys	Leu	Asp	Pro	Pro	Ser	Asp	Leu	Gln	Ser	Asn	Ile	Ser	Ser	Gly
145					150					155					160
His	Cys	Ile	Leu	Thr	Trp	Ser	Ile	Ser	Pro	Ala	Leu	Glu	Pro	Met	Thr
			165						170					175	
Thr	Leu	Leu	Ser	Tyr	Glu	Leu	Ala	Phe	Lys	Lys	Gln	Glu	Glu	Ala	Trp
			180					185					190		
Glu	Gln	Ala	Gln	His	Arg	Asp	His	Ile	Val	Gly	Val	Thr	Trp	Leu	Ile
		195					200					205			
Leu	Glu	Ala	Phe	Glu	Leu	Asp	Pro	Gly	Phe	Ile	His	Glu	Ala	Arg	Leu
	210					215					220				
Arg	Val	Gln	Met	Ala	Thr	Leu	Glu	Asp	Asp	Val	Val	Glu	Glu	Glu	Arg
225					230					235					240
Tyr	Thr	Gly	Gln	Trp	Ser	Glu	Trp	Ser	Gln	Pro	Val	Cys	Phe	Gln	Ala
			245						250					255	
Pro	Gln	Arg	Gln	Gly	Pro	Leu	Ile	Pro	Pro	Trp	Gly	Trp	Pro	Gly	Asn
			260					265					270		
Thr	Leu	Val	Ala	Val	Ser	Ile	Phe	Leu	Leu	Leu	Thr	Gly	Pro	Thr	Tyr
		275					280					285			

Leu Leu Phe Lys Leu Ser Pro Arg Val Lys Arg Ile Phe Tyr Gln Asn
 290 295 300
 Val Pro Ser Pro Ala Met Phe Phe Gln Pro Leu Tyr Ser Val His Asn
 305 310 315 320
 Gly Asn Phe Gln Thr Trp Met Gly Ala His Arg Ala Gly Val Leu Leu
 325 330 335
 Ser Gln Asp Cys Ala Gly Thr Pro Gln Gly Ala Leu Glu Pro Cys Val
 340 345 350
 Gln Glu Ala Thr Ala Leu Leu Thr Cys Gly Pro Ala Arg Pro Trp Lys
 355 360 365
 Ser Val Ala Leu Glu Glu Glu Gln Glu Gly Pro Gly Thr Arg Leu Pro
 370 375 380
 Gly Asn Leu Ser Ser Glu Asp Val Leu Pro Ala Gly Cys Thr Glu Trp
 385 390 395 400
 Arg Val Gln Thr Leu Ala Tyr Leu Pro Gln Glu Asp Trp Ala Pro Thr
 405 410 415
 Ser Leu Thr Arg Pro Ala Pro Pro Asp Ser Glu Gly Ser Arg Ser Ser
 420 425 430
 Ser Ser Ser Ser Ser Ser Ser Asn Asn Asn Asn Tyr Cys Ala Leu Gly
 435 440 445
 Cys Tyr Gly Gly Trp His Leu Ser Ala Leu Pro Gly Asn Thr Gln Ser
 450 455 460
 Ser Gly Pro Ile Pro Ala Leu Ala Cys Gly Leu Ser Cys Asp His Gln
 465 470 475 480
 Gly Leu Glu Thr Gln Gln Gly Val Ala Trp Val Leu Ala Gly His Cys
 485 490 495
 Gln Arg Pro Gly Leu His Glu Asp Leu Gln Gly Met Leu Leu Pro Ser
 500 505 510
 Val Leu Ser Lys Ala Arg Ser Trp Thr Phe
 515 520

<210> 8

<211> 468

<212> PRT

<213> Mus musculus

<400> 8

Met Ala Leu Gly Arg Cys Ile Ala Glu Gly Trp Thr Leu Glu Arg Val
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 Ala Val Lys Gln Val Ser Trp Phe Leu Ile Tyr Ser Trp Val Cys Ser
 20 25 30
 Gly Val Cys Arg Gly Val Ser Val Pro Glu Gln Gly Gly Gly Gly Gln
 35 40 45
 Lys Ala Gly Ala Phe Thr Cys Leu Ser Asn Ser Ile Tyr Arg Ile Asp
 50 55 60
 Cys His Trp Ser Ala Pro Glu Leu Gly Gln Glu Ser Arg Ala Trp Leu
 65 70 75 80
 Leu Phe Thr Ser Asn Gln Val Thr Glu Ile Lys His Lys Cys Thr Phe
 85 90 95
 Trp Asp Ser Met Cys Thr Leu Val Leu Pro Lys Glu Glu Val Phe Leu
 100 105 110
 Pro Phe Asp Asn Phe Thr Ile Thr Leu His Arg Cys Ile Met Gly Gln
 115 120 125
 Glu Gln Val Ser Leu Val Asp Ser Gln Tyr Leu Pro Arg Arg His Ile
 130 135 140
 Lys Leu Asp Pro Pro Ser Asp Leu Gln Ser Asn Val Ser Ser Gly Arg
 145 150 155 160

